A PTILONYSSID MITE FROM THE SPARROW HAWK, FALCO SPARVERIUS[1]

(ACARINA: RHINOYSSIDAE)

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Among a collection of several hundred slides and vials of mites sent to me for identification by Dr. Elwin E. Bennington was a series from the Sparrow Hawk, *Falco sparverius*. A hasty check of the literature indicated it to be a new species and measurements and illustrations were made preparatory to presenting a description. Subsequently a more thorough study of the literature revealed that I had *Ptilonyssus cerchneis* Fain, 1957. But since therre are no previous reports of Rhinonyssidae from Falconiforme birds in the United States, and because the specimens before me differ slightly from Fain's description, I decided to report the incidence in some detail.

Ptilonyssus (Rhinonyssoides) cerchneis Fain, 1957
(Figs. 1-7)

Characters diagnostic of the species are: the shape of the podosomal shield; the 5 pairs of small setae in the center of the dorsum; the long, narrow anal plate with only 2 setae and very extensive cribrum.

The specimens before me differ from Fain's description in several minor respects. Fain gave the length as 1128 microns. Of 16 females before me the largest was 1100, the average was 900 microns, but the L x W ratio was the same. The ratio was also the same for the dorsal and anal plates and for the legs. The sternal and genital plates, however, had ratios different from Fain's. In the specimens before me the sternal plate filled nearly the whole area between the sternal setae; in Fain's, less than 1/2 the area is filled. Fain gave the length of the genital plate as 165μ, in the specimens I have, the plate varied from 210-260, averaging 220μ. My specimens show an extra pair of setae ventrally between the genital and anal plates. On the dorsal side (Fig. 1), I have indicated 2 pygidial platelets. These are not plates in the sense that they are sclerotized, as in *Ptilonysus, sensu strictu,* they are merely non-straiated areas. In the dorsal view I present what might be interpreted as a medial plate but it is only a slight hump, a characteristic I was unable to properly convey with my poor artistic ability.

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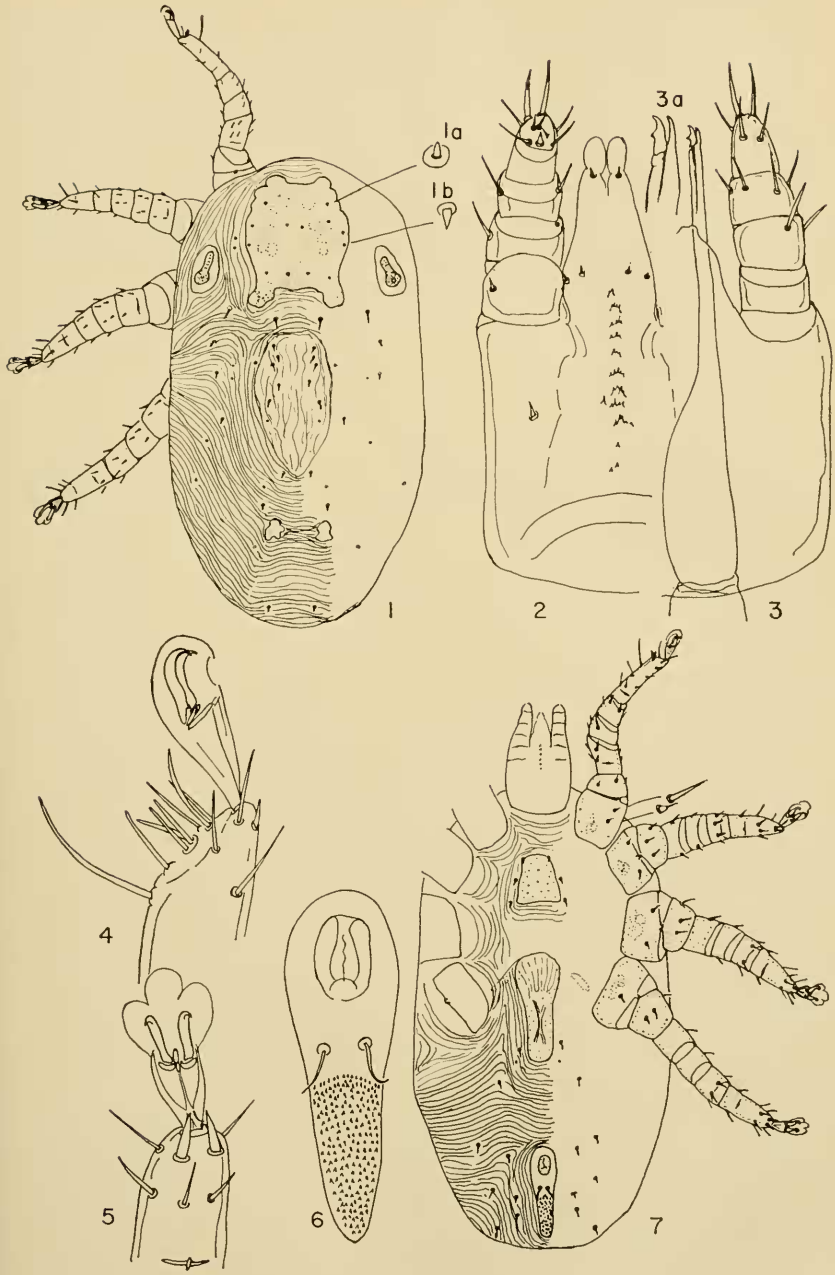
Ptilonyssus (R) cerchneis Fain, female. Fig. 1, dorsal view; figs. 1a & 1b, two dorsal plate setae enlarged; fig. 2, ventral view of right side of gnathosoma; fig. 3, dorsal view of right side of gnathosoma, including the right chelicera; fig. 3r, chela, enlarged; fig. 4, dorso-lateral aspect of left tarsus I; fig. 5, ventral aspect of tarsus II; fig. 6, anal plate, enlarged; fig 7, ventral view, including enlarged view of coxa I setae.


1a
1b
3a
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Note that the deutosternal teeth (Fig. 2) are in multiple and irregular rows and that the anterior hypostomal setae are quite distant from the posterior, paired setae.

Host—Falco sparverius, the Sparrow Hawk. Fain took the mite from *Cerchneis tinnunculus rufescens*, which is a small falcon very much like the sparrow hawk.

Locality.—Greeley, Colorado, U.S.A., Elwin E. Bennington, collector. The birds were collected in connection with encephalitis investigations at Greeley, Colorado. I am indebted to Dr. Bennington for referring the mites to me for study.

It is interesting to note that in the only other two species of *Ptilonyssus* reported from Falconiforme birds *P.* (*R.*) *donatoi* Pereira and de Castro, and *P.* (*R.*) *souzai* Pereira and de Castro, the anal plate also has only two setae, and the pygidial plate is lacking.

References Cited

Fain, A. 1957. Les Acariens des familles Epidermoptidae et Rhinonyssidae parasites des fosses nasales d'Oiseaux au Ruanda-Urundi et au Congo belge. Ann. du Musee Roy. du Congo Belge, Tervuren. Ser. 8 Sci. Zool. 60:1-76.

Pereira, C. e **M. P. de Castro.** 1949. Revisão da subfamilia "Ptilonyssinae Castro, 1948" com a descrição de algumas especies novas. Arq. do Instituto Biol. 19:218:235.

BOOK REVIEW

THE NEST ARCHITECTURE OF THE SWEAT BEES (HALICTINAE): A COMPARATIVE STUDY OF BEHAVIOR, by S. F. Sakagami and C. D. Michener, Univ. of Kansas Press, 135 pp., 181 figs., 1962. $5.00, bound.

This group is of particular interest because in their life history the species range from those which are strictly solitary through various intergrades to those which are truly social with a queen and worker caste. The authors have made an exhaustive review of the literature, and have combined this with unpublished observations by themselves and their associates. Their valuable synthesis utilizes data on about 125 of the 2000 known species. An important feature is a proposed classification of nest architecture which recognizes eight different basic types, many of which have several subtypes. The authors conclude that there has been much parallel evolution in nest structure. They also state that there is insufficient information on systematics and nest structure to permit definite conclusions as to relations between them.

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